

**WEST**

Generate Collection

L14: Entry 38 of 63

File: USPT

Sep 28, 1999

DOCUMENT-IDENTIFIER: US 5960200 A

TITLE: System to transition an enterprise to a distributed infrastructure

## DEPR:

The intent of the APPA process 442 is to gather and document an inventory of all the current and envisioned applications and business processes of an enterprise. The APPA process 442 separates the strategic from the tactical, and for each one, determines the transition that needs to take place to move from the existing to the envisioned situation.

## DEPR:

By way of background, an NFA is a mathematical model that consists of a set of states, a set of input symbols, a transition function that maps state-symbol pairs to sets of states, an initial state, and a set of final states. A special case of NFA is the deterministic finite automaton (DFA), which can have no unlabelled edges and at most one edge with the same label leaving a given state. Where time-space tradeoffs are an issue, an NFA is slower than a DFA but consumes much less space. In any event, an NFA and a DFA are both appropriate representations for real-life business processes. Furthermore, an NFA can automatically be converted into a DFA using fundamental principles of state machines and finite automaton theory. Consequently, which representation is used is of little consequence to a preferred embodiment of the business process engine 124. In addition, because business processes can be composed of a series of unrelated processes or can even be decomposed into sub-processes, more than one NFA, possibly organized in a hierarchical fashion, can be used to represent the various business processes modeled by an application.

## DEPR:

These functions comprise include file processing, server initialization, transaction call resolution, transaction entry point processing, and server wrap-up. Include file processing comprises initializing global variables, notably the Program Specification Block (PSB) structures for each transaction. By way of background, a PSB defines, for a given transaction, the database which may be accessed, the database segments that are available, and the type of access (read, update, etc.) which may occur. A PSB is also a collection of Program Communication Blocks (PCB). A PCB is an IMS structure to control the access to data as will be described in detail below.

## DEPR:

Query languages based on relational algebra are Structured Query Language (SQL) and Query By Example (QBE), both originated by IBM. SQL is usually embedded within a third generation language such as C, called the host language. Because host languages do not typically have multi-record operations, special SQL commands such as the cursor concept are provided to process multi-row query results in a record-at-a-time fashion. A cursor is a name given to a query. When a cursor is opened, the corresponding query is executed. Any subsequent fetch command on the cursor returns a new row to the host language. When the cursor is closed, query results are no longer available to the host language. Other special commands in SQL embedded mode include transaction processing features, dynamic SQL generation, and authorization control. The physical level deals with data dictionaries, data definitions (physical file structures, file space allocation), storage devices (data compression), access methods (sequential, index-sequential, direct).

## DEPR:

Sequential files use a sorted column to perform sequential search.

Index-sequential adds an index to a given column to provide random access. Large indices may themselves be indexed. Sequential files are difficult to maintain because adding or deleting a record requires reorganization of the whole file. Indexed (inverted) files remove the sequential part. Fully inverted refers to indices associated with each column. Indices carry update overhead but enable fast access. Direct access uses a single key and a calculation from that key to locate the physical address of the data in memory.

DEPR:

Specifically, the scanner 241 reads characters from the MFS file until a token has been read. The scanner 241 adds the token just obtained to a symbol table in which all the identifiers of the source language are stored, along with their characteristics. The tokens are then passed to the parser 243.

DEPR:

FIG. 19 is a block diagram of the first phase transformer program 224 of FIG. 17. As shown, the main elements of this transformer are a grammar definition for the source language 251, a dynamic symbol table generator for the source language 252, and a number of rules 253 for transforming a source language 221 to the meta language 225. In addition, an external data dictionary 228 contains the data structures, definitions, and common logic constructs pertaining to the source application.

DEPR:

The symbol table 252 is dynamically generated during parsing based on data definitions found in the source code 221 as well as in the data dictionary 228. All relevant data (i.e. non-procedural) elements found in the source code 221 are incorporated into the symbol table 252, while irrelevant elements are discarded based on source language grammar 251. The symbol table 252 is thus dynamically built to contain symbols for all data elements, data structures, data definitions and variables relevant to the source code file 221 being transformed.

DEPR:

Once parsing is complete, a complete set of rules 253 for transforming source language code to meta language code is programmed as declarative rules in a separate conversion routine 253. The conversion rules 253 operate as follows. A rule is applied to each source language construct parsed using the grammar 251. When a rule is executed, a source language construct is transformed to its equivalent construct in the meta language. Procedural constructs and primitives are thus regenerated in the meta language. Operations on data elements and data structures are first validated using the symbol table 252. Based on this validation, an equivalent operation is custom-generated in the meta language. The rule being executed for this validation operation generates a specific construct to reproduce the semantics of the transformed operation, such as a conversion from integer to floating point, if required.

DEPR:

FIG. 22 is a block diagram of the second phase transformer program 226 of FIG. 17. Similar to the first phase transformation, the main elements of the second phase transformer 226 are a grammar definition 261 for the meta language 225, a dynamic symbol table generator 262 for the meta language 225, and a number of rules 263 for transforming the meta language 225 to a target language 227. In addition, the second phase transformer program 226 uses the same external data dictionary 228 as does the first phase transformer program 224.

DEPR:

The symbol table 262 is dynamically generated during parsing based on data definitions found in the meta code 225 as well as in the data dictionary 228.

DEPR:

In a preferred embodiment of the present invention, the target DDL 238 is a relational database schema specified using conventional ANSI SQL language. Such a schema defines the tables that compose an application, along with their key fields, and other descriptive fields. Initial values and other constraints such as referential integrity clauses may also be included in this schema. Because relational schemas are well understood, and ANSI SQL syntax is well-documented, the primary task of the DDL converter 235 is to map the syntax of source DDL 232 to the corresponding ANSI SQL syntax. In a preferred embodiment of the present invention, this "target" DDL 238 can be viewed as an intermediary language that

can then be converted to the final target DDL language for increased maintainability and flexibility, as was the case with the user interface and procedural language conversion utility. For illustrative purposes, IMS DL/1 can be considered as the source DLL 232.

DEPR:

FIG. 25 is a block diagram illustrating a schema conversion. As shown, the DDL converter 235 is sub-divided into a first converter 235a and a second converter 232b. The first converter 235a takes DBDxx 232a, DBDxx 232b, and COPYLIB 235c as inputs and generates a table creation SQL statement file 238a, an index creation SQL statement file 238b, a primary key creation SQL statement file 238c, and a database schema ANSI C header file 238d.

DEPR:

By way of background, an IMS database schema depends on Data Base Descriptions (DBD) and COBOL copy libraries (COPYLIB). All IMS data bases must be defined through DBD generation prior to use by application programs. A DBD is the DL/1 control block that contains all the information necessary to describe a data base, namely segment types, physical and logical relationships between segment types, database organization and access method, and physical characteristics of the database. COPYLIB contains COBOL data structures definition and is used to create corresponding C structures and IMS segment definitions.

DEPR:

The first converter 235a generates a table file 238a, which is used to create tables in the target RDBMS. The table file 238a includes simple relational table creation statements, without indices, keys, or reference integrity. Consequently, it can be generated directly from COPYLIB 232c information, without any DBD input. For example, the COPYLIB entry for a segment is used to generate a corresponding relational table.

DEPR:

A relational table is built from an IMS segment as follows. First, all the key fields of all the ancestors of the segment in question in the IMS hierarchy are included in the relational table into which the segment in question is being converted. Then, all the local key fields of the segment being converted are included in the target relational table. Finally, all the local non-key fields of the segment to convert are added to the target relational table.

DEPR:

The first converter 235a also generates the index file 238b and the primary key file 238c, which are derived from the table file 238a. The first converter 235a creates one index for each parent of the converted segment by concatenating the keys for that parent. One index is also created for each local key field.

DEPR:

The first converter 235a also creates the schema header file 238d having information for each segment using the DBDxx 232a and corresponding DBDxxL 232b to provide schema information to application programs. Preferably, a segment header file includes two ANSI C data structures: a segment and a segment array. The segment structure includes the following information: a segment name, the names of the segment columns, the segment child index in the form of another header file, the length of each segment column, the expanded column length, the PIC mask for each segment column indicating column type and size, the column usage, a logical key and the corresponding local key index, the number of columns in the segment, the number of parent keys in the segment, and the number of local keys for this segment. The segment array structure includes the following information: a segment name, physical child names, the number of children, a logical flag, and a pointer to the corresponding segment data structure.

DEPR:

In addition to the first converter 235a, the second converter 235b is used to convert PSB definitions 232d into PSB header files 238e. As mentioned previously, a PSB defines the database which can be accessed, the segments within the database which are available, and the type of access (read, update, etc.) which can occur. The PSB header file 238e provides such database access information to application programs.

DEPR:

Once all conversion is complete and all output files are available, the order of creation for a given target database table is first to create the table using the table creation file 238a, next load the data from the target data 239, then create the primary key using the primary key creation file 238c, and finally to create the indices from the index creation file 238b. Once the target database structure is established and all database data is loaded, the ANSI C structures in the schema header file 238d and the PSB header file 238e are used at runtime by application programs to access the target database structures.

## DEPR:

In addition, default constraints can be automatically associated to business objects based on the business object type. This can lead to automatic generation of maintenance screens for lookup business objects that can take a known range of values. The graphical business object editor can also be used to create templates that can be reused throughout an application. For instance, every screen may have a number of fixed function keys or buttons such as display, insert, delete, update, clear, refresh, backup, or quit, as well as a number of variable function keys whose semantics change from screen to screen. These function keys can be treated as a group and provided automatically as part of the template for every screen in an application.

## DEPR:

FIG. 33 is a schematic block diagram of the facilitation tools 360 of FIG. 1. The facilitation tools 360 are graphic editing tools. The primary concept is to provide a structured, yet flexible, methodology for gathering user and application requirements while enabling the use of the resulting documentation to automatically generate a number of the architectural constructs that would otherwise have to be encoded manually. These facilitation tools 360 can include project tools 361, organizational tools 362, communication tools 363, office tools 364, groupware tools 365, and templates 366 for processing user inputs.

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| l2 and database | 37        |

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| 119 and securities with exchange | 47        |

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| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 113 and "american standard code"  | 112              | <u>L18</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 113 and (ascII or "american standard code for information interchange") | 1956             | <u>L17</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 113 and ascII or "american standard code for information interchange"   | 1958             | <u>L16</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 113 and "american standard code for information interchange"            | 0                | <u>L15</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 113 and document  | 63               | <u>L14</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 112 and segment   | 74               | <u>L13</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 111 and template  | 133              | <u>L12</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 110 and relational adj database   | 392              | <u>L11</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | symbol and index or indices and securities with exchange                | 26061            | <u>L10</u>      |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 18 and relational near database   | 4                | <u>L9</u>       |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | database and symbol and index and securities with exchange              | 53               | <u>L8</u>       |
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| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 11 and stock near exchange  | 34               | <u>L2</u>       |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | ticker with symbol  | 71               | <u>L1</u>       |

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| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 17 and ticker with symbol or exchange with symbol         | 566              | <a href="#">L9</a>  |
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| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 15 and symbol with segment                                | 11               | <a href="#">L6</a>  |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 14 and symbol with template                               | 141              | <a href="#">L5</a>  |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 13 and document   | 219232           | <a href="#">L4</a>  |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 12 and database   | 13257            | <a href="#">L3</a>  |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | 11 and link near6 parent or identifier                    | 55373            | <a href="#">L2</a>  |
| USPT,PGPB,JPAB,EPAB,DWPI,TDBD | symbols or identifiers near6 link\$                       | 205162           | <a href="#">L1</a>  |

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L6: Entry 2 of 11

File: USPT

Aug 14, 2001

US-PAT-NO: 6275611

DOCUMENT-IDENTIFIER: US 6275611 B1

TITLE: Handwriting recognition device, method and alphabet, with strokes grouped into stroke sub-structures

DATE-ISSUED: August 14, 2001

## INVENTOR-INFORMATION:

| NAME                  | CITY      | STATE | ZIP CODE | COUNTRY |
|-----------------------|-----------|-------|----------|---------|
| Parthasarathy; Kannan | Palo Alto | CA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME           | CITY       | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|----------------|------------|-------|----------|---------|-----------|
| Motorola, Inc. | Schaumburg | IL    |          |         | 02        |

APPL-NO: 8/ 732957

DATE FILED: October 17, 1996

INT-CL: [7] G06K 9/00

US-CL-ISSUED: 382/187; 382/200, 382/202, 382/225

US-CL-CURRENT: 382/187; 382/200, 382/202, 382/225

FIELD-OF-SEARCH: 382/185, 382/186, 382/187, 382/188, 382/189, 382/190, 382/191, 382/197, 382/200, 382/202, 382/209, 382/213, 382/214, 382/215, 382/220, 382/225, 382/228, 382/229, 345/173, 345/175

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

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|                          | PAT-NO         | ISSUE-DATE     | PATENTEE-NAME        | US-CL   |
|--------------------------|----------------|----------------|----------------------|---------|
| <input type="checkbox"/> | <u>4561105</u> | December 1985  | Crane et al.         | 382/13  |
| <input type="checkbox"/> | <u>4972496</u> | November 1990  | Sklarew              | 382/13  |
| <input type="checkbox"/> | <u>5579408</u> | November 1996  | Sakaguchi et al.     | 382/187 |
| <input type="checkbox"/> | <u>5615285</u> | March 1997     | Beernizk             | 382/189 |
| <input type="checkbox"/> | <u>5644648</u> | July 1997      | Bose et al.          | 382/177 |
| <input type="checkbox"/> | <u>5644652</u> | July 1997      | Bellegarda et al.    | 382/187 |
| <input type="checkbox"/> | <u>5737593</u> | April 1998     | Agrawal et al.       | 382/187 |
| <input type="checkbox"/> | <u>5740273</u> | April 1998     | Parthasarathm et al. | 382/187 |
| <input type="checkbox"/> | <u>5956433</u> | September 1999 | Sasaki               | 380/275 |
| <input type="checkbox"/> | <u>5970170</u> | October 1999   | Kuclashevich et al.  | 382/187 |

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|                |             |         |       |
|----------------|-------------|---------|-------|
| FOREIGN-PAT-NO | PUBN-DATE   | COUNTRY | US-CL |
| 0 538038       | April 1993  | EPX     |       |
| 2227867A       | August 1990 | GBX     |       |

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IEEE Proceedings of ICPR 1996; "Robust and Highly Customizable Recognition of On-Line Handwritten Japanese Characters", by Nakagawa et al; pp. 269-273.  
IEEE Proceedings of the Third International Conference on Document Analysis and Recognition, Aug. 14-16, 1995, Montreal, Canada. "On-line Recognition of Run-on Korean Characters", Pyeoung Kee Kim et al., pp. 54-57.

ART-UNIT: 261

PRIMARY-EXAMINER: Bella; Matthew C.

ATTY-AGENT-FIRM: Wood; Jay Ray Boxe; Romi N. Watanabe; Hisashi D.

## ABSTRACT:

A method of representing handwriting which includes receiving a pen input, for example at a digitizer (10), segmenting the input into strokes (13), grouping the strokes into stroke sub-structures (14) and quantizing the stroke sub-structures according to a predefined set (the "alphabet") of stroke sub-structures. For handwriting recognition, distance measurements are computed between the input stroke sub-structures and members of a predefined set or "alphabet" (19) of stroke sub-structures.

18 Claims, 12 Drawing figures

**WEST****End of Result Set**

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L10: Entry 2 of 2

File: USPT

Oct 17, 2000

US-PAT-NO: 6134338

DOCUMENT-IDENTIFIER: US 6134338 A

TITLE: Computer automated system and method for converting source documents bearing symbols and alphanumeric text relating to three dimensional objects

DATE-ISSUED: October 17, 2000

## INVENTOR-INFORMATION:

| NAME                | CITY      | STATE | ZIP CODE | COUNTRY |
|---------------------|-----------|-------|----------|---------|
| Solberg; Stephen J. | La Crosse | WI    |          |         |
| Szymanski; Curt D.  | Mukwonago | WI    |          |         |

## ASSIGNEE-INFORMATION:

| NAME                    | CITY        | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|-------------------------|-------------|-------|----------|---------|-----------|
| Solberg Creations, Inc. | La Crescent | MN    |          |         | 02        |

APPL-NO: 9/ 087706

DATE FILED: June 1, 1998

## PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part of U.S. application Ser. No. 08/445,687 filed May 22, 1995, now U.S. Pat. No. 5,761,328.

INT-CL: [7] G06K 9/00

US-CL-ISSUED: 382/113; 707/502

US-CL-CURRENT: 382/113; 707/502

FIELD-OF-SEARCH: 382/100, 382/113, 382/197, 382/198, 382/200, 382/286, 382/154, 707/502, 345/419, 345/440, 345/442, 345/443

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| PAT-NO                                  | ISSUE-DATE     | PATENTEE-NAME    | US-CL   |
|---|----------------|------------------|---------|
| <input type="checkbox"/> <u>4193087</u> | March 1980     | Altman           | N/A     |
| <input type="checkbox"/> <u>4489389</u> | December 1984  | Beckwith et al.  | N/A     |
| <input type="checkbox"/> <u>4661811</u> | April 1987     | Gray et al.      | N/A     |
| <input type="checkbox"/> <u>4737916</u> | April 1988     | Ogawa et al.     | N/A     |
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| <input type="checkbox"/> <u>4843569</u> | June 1989      | Sawada           | N/A     |
| <input type="checkbox"/> <u>4845643</u> | July 1989      | Clapp            | 364/518 |
| <input type="checkbox"/> <u>4852020</u> | July 1989      | Morita           | N/A     |
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| <input type="checkbox"/> <u>4953106</u> | August 1990    | Ganser et al.    | N/A     |
| <input type="checkbox"/> <u>4964066</u> | October 1990   | Yamane et al.    | N/A     |
| <input type="checkbox"/> <u>5001677</u> | March 1991     | Masters          | N/A     |
| <input type="checkbox"/> <u>5050222</u> | September 1991 | Lee              | N/A     |
| <input type="checkbox"/> <u>5073819</u> | December 1991  | Gates et al.     | N/A     |
| <input type="checkbox"/> <u>5111514</u> | May 1992       | Ohta             | N/A     |
| <input type="checkbox"/> <u>5123087</u> | June 1992      | Newell et al.    | N/A     |
| <input type="checkbox"/> <u>5164996</u> | November 1992  | Pastor           | N/A     |
| <input type="checkbox"/> <u>5179645</u> | January 1993   | Tanimori         | N/A     |
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| <input type="checkbox"/> <u>5204944</u> | April 1993     | Wolberg et al.   | N/A     |
| <input type="checkbox"/> <u>5233357</u> | August 1993    | Ingensand et al. | N/A     |
| <input type="checkbox"/> <u>5258855</u> | November 1993  | Lech et al.      | 358/462 |
| <input type="checkbox"/> <u>5268998</u> | December 1993  | Simpson          | N/A     |
| <input type="checkbox"/> <u>5276784</u> | January 1994   | Ohki             | N/A     |
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| <input type="checkbox"/> <u>5517578</u> | May 1996       | Altman           | N/A     |
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ART-UNIT: 271

PRIMARY-EXAMINER: Tran; Phuoc

ATTY-AGENT-FIRM: Fieschko, Esq.; Craig A. DeWitt Ross & Stevens S.C.

## ABSTRACT:

The computer automated system and method of converting a digitized raster image of a scanned source document, bearing alphanumeric text relating to a plurality of physical dimensions and to a plurality of edges of a three dimensional object and of a moiety a symbol represents and of an insertion point of the moiety into the three dimensional object, at least one orthographic drawing view having a plurality of lines oriented in a direction to each other and corresponding to the

edges of the three dimensional object, and the symbol, into mathematically accurate three dimensional vectors corresponding to the physical dimensions and the edges of the object and moiety and into a mathematically accurate computer drawing file. The digitized raster image is organized into an orthographic viewpoint file corresponding to the view. The file is imported into a corresponding orthographic viewport in a CAD drawing file having three dimensional vector generating capability in an existing CAD system having a COGO subroutine and using an OCR and an OSR operating within the CAD system. The alphanumeric text relating to the symbol is recognized by the OCR and an attributed symbol vector file is created using CAD block attribution techniques. The alphanumeric text relating to the plurality of physical dimensions and to the plurality of edges of the three dimensional object and the insertion point is recognized by the OCR; the symbol is recognized by the OSR. The recognized alphanumeric text and recognized symbol and the attributed symbol vector file are converted by the COGO subroutine into mathematically accurate vectors which can be used for producing accurate drawings and for Computer Assisted Manufacturing. Mechanical, engineering and architectural drawing (plans) are converted by the present invention.

26 Claims, 19 Drawing figures

**WEST**☐ **Generate Collection**

L3: Entry 8 of 23

File: USPT

Sep 19, 2000

US-PAT-NO: 6122635

DOCUMENT-IDENTIFIER: US 6122635 A

TITLE: Mapping compliance information into useable format

DATE-ISSUED: September 19, 2000

## INVENTOR-INFORMATION:

| NAME                 | CITY          | STATE | ZIP CODE | COUNTRY |
|----------------------|---------------|-------|----------|---------|
| Burakoff; Stephen V. | Chestnut Hill | MA    |          |         |
| Simmel; Sergiu S.    | Brookline     | MA    |          |         |
| Watkin; Heath L.     | Watertown     | MA    |          |         |
| Fein; Robert A.      | Newton        | MA    |          |         |
| Wiley; Garrett S.    | Wellesley     | MA    |          |         |
| Amster; Richard B.   | Brookline     | MA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME                                   | CITY    | STATE | ZIP CODE | COUNTRY | TYPE | CODE |
|--|---------|-------|----------|---------|------|------|
| NewRiver Investor Communications, Inc. | Andover | MA    |          |         |      | 02   |

APPL-NO: 9/ 023979

DATE FILED: February 13, 1998

INT-CL: [7] G06F 17/30

US-CL-ISSUED: 707/102; 707/104, 705/4

US-CL-CURRENT: 707/102; 705/4, 707/104.1

FIELD-OF-SEARCH: 705/36, 705/37, 705/4, 707/104, 707/9, 707/102

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ **Search Selected**☐ **Search ALL**

|                          | PAT-NO         | ISSUE-DATE    | PATENTEE-NAME     | US-CL   |
|--------------------------|----------------|---------------|-------------------|---------|
| <input type="checkbox"/> | <u>5270922</u> | December 1993 | Higgins           | 364/408 |
| <input type="checkbox"/> | <u>5502637</u> | March 1996    | Beaulieu et al.   | 705/36  |
| <input type="checkbox"/> | <u>5590325</u> | December 1996 | Kolton et al.     | 707/104 |
| <input type="checkbox"/> | <u>5689650</u> | November 1997 | McClelland et al. | 705/36  |
| <input type="checkbox"/> | <u>5819271</u> | October 1998  | Mahoney et al.    | 707/9   |
| <input type="checkbox"/> | <u>5864871</u> | January 1999  | Kitain et al.     | 707/104 |
| <input type="checkbox"/> | <u>5893079</u> | April 1999    | Cwenar            | 705/36  |
| <input type="checkbox"/> | <u>5918218</u> | June 1999     | Harris et al.     | 705/37  |
| <input type="checkbox"/> | <u>5926792</u> | July 1999     | Koppes et al.     | 705/4   |



## FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE  | COUNTRY | US-CL |
|----------------|------------|---------|-------|
| WO 96/18963    | June 1996  | WOX     |       |
| WO 97/15018    | April 1997 | WOX     |       |
| WO 98/33131    | July 1998  | WOX     |       |

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ART-UNIT: 271

PRIMARY-EXAMINER: Amsbury; Wayne

ATTY-AGENT-FIRM: Wolf, Greenfield &amp; Sacks, P.C.

## ABSTRACT:

A system for providing access to compliance information includes a subsystem for acquiring securities information from one or more database sources. The system extracts compliance information from the acquired securities information that is related to a particular security. The system also includes a subsystem for providing access to the computer-readable compliance information files over a computer communications link.

30 Claims, 7 Drawing figures

**WEST**

Generate Collection

L3: Entry 7 of 23

File: USPT

Feb 6, 2001

US-PAT-NO: 6185567

DOCUMENT-IDENTIFIER: US 6185567 B1

TITLE: Authenticated access to internet based research and data services

DATE-ISSUED: February 6, 2001

## INVENTOR-INFORMATION:

| NAME                      | CITY         | STATE | ZIP CODE | COUNTRY |
|---------------------------|--------------|-------|----------|---------|
| Ratnaraj; Paul J.         | Sicklerville | NJ    |          |         |
| McCartney; William Gerard | Philadelphia | PA    |          |         |
| To; Son                   | Philadelphia | PA    |          |         |
| Crispi; Steven J.         | Philadelphia | PA    |          |         |
| Akhavain; Jalal D.        | New York     | NY    |          |         |

## ASSIGNEE-INFORMATION:

| NAME   | CITY         | STATE | ZIP CODE | COUNTRY | TYPE | CODE |
|--|--------------|-------|----------|---------|------|------|
| The Trustees of the University of Pennsylvania | Philadelphia | PA    |          |         |      | 02   |

APPL-NO: 9/ 087184

DATE FILED: May 29, 1998

INT-CL: [7] G06F 17/30

US-CL-ISSUED: 707/10; 705/26, 707/5, 707/8, 707/100, 709/203

US-CL-CURRENT: 707/10; 705/26, 707/100, 707/5, 707/8, 709/203

FIELD-OF-SEARCH: 707/2-6, 707/10, 707/8, 707/100, 707/103, 707/202, 705/26, 705/27, 709/203

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

|                          | PAT-NO         | ISSUE-DATE   | PATENTEE-NAME        | US-CL      |
|--------------------------|----------------|--------------|----------------------|------------|
| <input type="checkbox"/> | <u>5398336</u> | March 1995   | Tantry et al.        | 707/103    |
| <input type="checkbox"/> | <u>5708780</u> | January 1998 | Levergood et al.     | 395/200.12 |
| <input type="checkbox"/> | <u>5778367</u> | July 1998    | Wesinger, Jr. et al. | 707/10     |
| <input type="checkbox"/> | <u>5819255</u> | October 1998 | Celis et al.         | 707/2      |
| <input type="checkbox"/> | <u>5826014</u> | October 1998 | Coley et al.         | 395/187.01 |
| <input type="checkbox"/> | <u>5826265</u> | October 1998 | Van Huben et al.     | 707/8      |
| <input type="checkbox"/> | <u>5859972</u> | January 1999 | Subramaniam et al.   | 709/203    |
| <input type="checkbox"/> | <u>5920873</u> | July 1999    | Van Huben et al.     | 707/202    |
| <input type="checkbox"/> | <u>5937406</u> | August 1999  | Balabine et al.      | 707/100    |
| <input type="checkbox"/> | <u>5963915</u> | October 1999 | Kirsch               | 705/26     |
| <input type="checkbox"/> | <u>6094654</u> | July 2000    | Van Huben et al.     | 707/8      |

ART-UNIT: 271

PRIMARY-EXAMINER: Alam; Hosain T.

ASSISTANT-EXAMINER: Alam; Shahid

ATTY-AGENT-FIRM: Woodcock Washburn Kurtz Mackiewicz &amp; Norris LLP

## ABSTRACT:

Access to a database is provided via the Internet using a World Wide Web server including a search engine, a CGI gateway and user selectable data queries for extracting data, generating reports, and the like. Access by the user is authenticated by querying the user's central machine for authentication. The authentication process operates by sending a page request from the web browser through three checkpoints before the requested page can be served to the web browser. The first checkpoint determines if the requested page is protected. If not, the requested page is served to the web browser. However, if the requested page is protected, the authentication process on the web server checks the host name of the system where the page request is coming from. If the domain of the requesting host is the same domain specified in the web authentication configuration, then the requested page is served to the web browser. However, if the page request is determined to come from outside of the domain of the web server, then the authentication process checks a "cookie" from the web browser to determine if the requesting user has been authenticated as an authorized user earlier in the same session. If the cookie has been "set" during the login procedure, then the requested page is served to the web browser. Otherwise, the user is prompted with a login page. After the user ends the web browser session, the cookie is cleared. Data Query software at the web server permits queries initiated via a web browser to be completed off-line and the results e-mailed to the initiator of the request.

5 Claims, 4 Drawing figures

**WEST**☐ Generate Collection

L3: Entry 5 of 23

File: USPT

May 22, 2001

US-PAT-NO: 6236980

DOCUMENT-IDENTIFIER: US 6236980 B1

TITLE: Magazine, online, and broadcast summary recommendation reporting system to aid in decision making

DATE-ISSUED: May 22, 2001

## INVENTOR-INFORMATION:

| NAME          | CITY          | STATE | ZIP CODE | COUNTRY |
|---------------|---------------|-------|----------|---------|
| Reese; John P | West Hartford | CT    | 06117    |         |

APPL-NO: 9/ 057823

DATE FILED: April 9, 1998

INT-CL: [7] G06F 17/60

US-CL-ISSUED: 705/36; 705/26, 705/10

US-CL-CURRENT: 705/36; 705/10, 705/26

FIELD-OF-SEARCH: 705/36, 705/26, 705/27, 705/10

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

|                          | PAT-NO         | ISSUE-DATE     | PATENTEE-NAME   | US-CL     |
|--------------------------|----------------|----------------|-----------------|-----------|
| <input type="checkbox"/> | <u>4870579</u> | September 1989 | Hey             | 364/419   |
| <input type="checkbox"/> | <u>4989141</u> | January 1991   | Lyons et al.    | 364/408   |
| <input type="checkbox"/> | <u>4996642</u> | February 1991  | Hey             | 364/419   |
| <input type="checkbox"/> | <u>5006998</u> | April 1991     | Yasunobu et al. | 364/513   |
| <input type="checkbox"/> | <u>5132899</u> | July 1992      | Fox             | 364/408   |
| <input type="checkbox"/> | <u>5262941</u> | November 1993  | Saladin et al.  | 364/408   |
| <input type="checkbox"/> | <u>5383111</u> | January 1995   | Homma et al.    | 364/401   |
| <input type="checkbox"/> | <u>5414838</u> | May 1995       | Kolton et al.   | 395/600   |
| <input type="checkbox"/> | <u>5502637</u> | March 1996     | Beaulieu et al. | 364/408   |
| <input type="checkbox"/> | <u>5583763</u> | December 1996  | Atcheson et al. | 364/55101 |
| <input type="checkbox"/> | <u>5812988</u> | September 1998 | Sandretto       | 705/36    |
| <input type="checkbox"/> | <u>5819271</u> | October 1998   | Mahoney et al.  | 707/9     |
| <input type="checkbox"/> | <u>5893079</u> | April 1999     | Cwenar          | 705/36    |
| <input type="checkbox"/> | <u>5897639</u> | April 1999     | Greef et al.    | 707/103   |

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"Zacks, Newsbytes Offer Time Sensitive Stories to Investors," Newsbytes News Network, Sep. 9, 1996.\*

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"Money Talks Adds Daily Small-Cap Interviews and Earnings Analysis," PR Newswire, p. 1219NYF001A, Dec. 19, 1997.\*

Harris, Diane, "Smart Ways to Shop the New Financial Supermarkets," Money, vol. 26, No. 6, pp. 100-109, Jun. 1997.\*

Gianturco, Michael, "Investing on the Web: Surf and Grow Rich!," Forbes, pp. 36-38, Jun. 3, 1996.

ART-UNIT: 275

PRIMARY-EXAMINER: Stamber; Eric W.

ASSISTANT-EXAMINER: Meinecke-Diaz; Susanna

ABSTRACT:

The invention utilizes a computer apparatus to automatically generate displays or reports containing investment security or element recommendations (FIG. 4, box 133) along with an optional summarization of the reasons (FIG. 4, box 134) for the recommendation from magazines, online sources, and broadcast programs for one specific security or element (FIG. 4, box 132) at a time or one specific recommendation source (FIG. 7, box 184) at a time. The aforementioned reports could additionally include the performance of the recommendors (FIG. 5, box 156). A report could also be provided to show the performance statistics (FIG. 8b, box 196, box 204, box 206, box 208, box 210, box 212, box 214) of a recommendation source (FIG. 8b, box 194) for predetermined date ranges (FIG. 8b, box 216) either in an aggregated and averaged format (FIG. 8b) or for each recommendation (FIG. 8c) made by the recommendation source. Additionally, a report could be provided to show the performance of elements or securities that were mentioned (FIG. 51), not just recommended, in magazines, online sources, and broadcast programs.

26 Claims, 57 Drawing figures

**WEST**

Generate Collection

L3: Entry 19 of 23

File: USPT

Aug 16, 1994

US-PAT-NO: 5339392

DOCUMENT-IDENTIFIER: US 5339392 A

TITLE: Apparatus and method for creation of a user definable video displayed document showing changes in real time data

DATE-ISSUED: August 16, 1994

## INVENTOR-INFORMATION:

| NAME                | CITY      | STATE | ZIP CODE | COUNTRY |
|---------------------|-----------|-------|----------|---------|
| Risberg, Jeffrey S. | Palo Alto | CA    | 94303    |         |
| Skeen, Marion D.    | Palo Alto | CA    | 94306    |         |

APPL-NO: 7/ 636044

DATE FILED: December 28, 1990

## PARENT-CASE:

This is a continuation-in-part application of a prior co-pending U.S. patent application entitled "APPARATUS AND METHOD FOR PROVIDING DECOUPLING OF DATA EXCHANGE DETAILS AND PROVIDING HIGH PERFORMANCE COMMUNICATION BETWEEN SOFTWARE PROCESSES", Ser. No. 07/632,551, filed Dec. 21, 1990, which was a continuation-in-part of a prior co-pending U.S. patent application entitled "APPARATUS AND METHOD FOR PROVIDING DECOUPLING OF DATA EXCHANGE DETAILS AND PROVIDING HIGH PERFORMANCE COMMUNICATION BETWEEN SOFTWARE PROCESSES", Ser. No. 07/601,117, filed Oct. 22, 1990, now U.S. Pat. No. 5,257,369, which was a continuation-in-part of a prior co-pending U.S. patent application entitled "APPARATUS AND METHOD FOR PROVIDING DECOUPLING OF DATA EXCHANGE DETAILS AND PROVIDING HIGH PERFORMANCE COMMUNICATION BETWEEN SOFTWARE PROCESSES", Ser. No. 07/386,584, filed Jul. 27, 1989, now U.S. Pat. No. 5,187,787.

INT-CL: [5] G06F 15/62, G06F 15/16

US-CL-ISSUED: 395/161; 395/155, 364/408

US-CL-CURRENT: 345/762; 345/765, 345/774, 707/501.1

FIELD-OF-SEARCH: 364/144-149, 364/155, 364/161, 364/408, 364/411, 364/412, 364/419, 358/84

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

| PAT-NO                           | ISSUE-DATE     | PATENTEE-NAME   | US-CL     |
|----------------------------------|----------------|-----------------|-----------|
| <input type="checkbox"/> 4486853 | December 1984  | Parsons         | 364/408 X |
| <input type="checkbox"/> 4642790 | February 1987  | Minshull et al. | 364/900   |
| <input type="checkbox"/> 4750135 | June 1988      | Boilen          | 364/514   |
| <input type="checkbox"/> 4845645 | July 1989      | Matin et al.    | 364/521   |
| <input type="checkbox"/> 4868866 | September 1989 | Williams, Jr.   | 364/408 X |
| <input type="checkbox"/> 4901221 | February 1990  | Kodosky et al.  | 364/200   |
| <input type="checkbox"/> 4914568 | April 1990     | Kodosky et al.  | 364/200   |
| <input type="checkbox"/> 4914587 | April 1990     | Clouse          | 364/408   |
| <input type="checkbox"/> 4943866 | July 1990      | Barker et al.   | 358/335   |
| <input type="checkbox"/> 5058185 | October 1991   | Morris et al.   | 382/41    |
| <input type="checkbox"/> 5126936 | June 1992      | Champion et al. | 364/408   |

## FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE    | COUNTRY | US-CL |
|----------------|--------------|---------|-------|
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ART-UNIT: 231

PRIMARY-EXAMINER: Herndon; Heather R.

ATTY-AGENT-FIRM: Fish; Ron

## ABSTRACT:

A software program providing a facility for a user to compose a custom active document using tools provided by the program. The active document can be comprised of one or more sheets each of which is composed in a custom manner by the user and each of which can show real time data and the changes therein generated by any complex system. The user can select which real time data is to be displayed, where it is to be displayed and in what format and style it is to be displayed. The user can control the "look" of the active document through full control of the fonts, colors, pen etc. The user may also define alarm limits against which real time

data updates are compared as well as scripts of commands to be performed in case an alarm limit is exceeded. Scripts of commands to be performed written by the user may also be invoked from a menu option. The tools provided for a financial analysis embodiment of the invention allow the user to layout each sheet of the active document with: quotes of prices, volume etc. on various financial instruments such as stocks, bonds, etc., tickers showing trade data, graphs over time of various values or superimposed graphs of changes over time of several real time data values, bar graphs of some aspect of a set of financial instruments, segments defined by the user of pages selected by the user of page-based financial services like telerate, and groups of real time data. "Buttons" can be programmed to perform any user defined script of actions. Metadata and style maps are used to offload some of the work of specifying the format of the displayed objects from the user to the machine itself.

46 Claims, 53 Drawing figures



**WEST**

Generate Collection

L3: Entry 19 of 23

File: USPT

Aug 16, 1994

DOCUMENT-IDENTIFIER: US 5339392 A

TITLE: Apparatus and method for creation of a user definable video displayed document showing changes in real time data

## BSPR:

The tools provide access to information from any source including other programs running on the same host 0 or somewhere else on the network, ticker plants, information services or databases. In the preferred embodiment, the program can support data feeds from Reuters Market Feed 2000/IDN, Telekurs Ticker, CMQ Telerate MarketFeed, Canquote, and Quotron. In addition, the program (known commercially as the MarketSheet.TM. facility or program) can accept prices extracted from paged market data feeds such as Telerate TDPF, Reuters RDCDF, FBI and RMJ. These types of data are first extracted by Page Shredder.TM., another program available from the assignee of the present invention, but the particular manner in which the prices are extracted from page feeds is not critical nor is it part of the invention and the invention may be practiced without this facility or with any prior art method of extracting prices.

## DEPR:

Composite or "wild card" tickers can be created simply by entering for the symbol a period followed by the name of the exchange code. The ticker object will then show every update reported by the feed on that exchange.

## DEPR:

Referring to FIG. 7, there is shown a diagram of the parts of an Active Object. An instance of an Active Object 100 contains a data object 102, a Style Map 104, a Display Object 106, one or more Event Triggers shown generally at 108 and one or more Event Scripts of commands to be performed sequentially if an Event Trigger condition occurs. These Event Scripts are shown generally at 110. The Active Object 100 includes a local event dispatcher which dispatches events, e.g., user commands, to the various Active Object components for processing. For example, data updates from a network or database are dispatched to the Data Object 102, and "display frame" or display related events are dispatched to the Display Object 106. Events handled by the local dispatcher can be internally generated, such as a "change notification" event from the Data Object, which is dispatched to the Display Object so that the displayed representation can be updated.

## DEPR:

The Active Object 100 also has associated operations such as "move yourself", "change the data using the real time network data update or a database update"; etc. Most operations are done by the local dispatcher. For example, data update events cause the local dispatcher to send the data to the Data Object 102. Programs according to the teachings of the invention are written for "event driven" processing style. An "event" as that term is used here can mean a user caused event such as an input from the keyboard, pointing device or other input device or it could be generated by the program itself, the network interface, or any other process in the environment or elsewhere on the network. The event dispatchers in the system match each event with some operation to call. The Active Objects have their own event dispatchers and there is a global event dispatcher which deals with input events from the network, the input devices, the operating system or a database which is used to store pricing information so that when a subscription is entered, the user may get the most recent data immediately and does not have to wait for the next update.

## DEPR:

Referring to FIG. 9, there is shown a diagram of the event architecture of a program according to the teachings of the invention. At the left are shown symbols for some of the input event generators. User events can be generated using a voice processor 124, a keyboard 126, a mouse 128, or a touchscreen 130 or any other user manipulated device. Other input events can originate from the network 32, a file/database 132 or from the operating system 134. The file/database stores real time data as it comes in from the network so that users requesting a price etc. can immediately have access to the latest information and need not wait for the next update of the requested information. An event originating from the network or the database is usually the data returned after a request generated by the creation of an Active Object such as a quote, ticker, graph etc.

DEPR:

Some events can originate within and are locally dispatched from the Active Objects themselves or from the menu objects. For example, the user may click on a font change option from one of the menu objects 56, and this event will be dispatched as an update to the style map of the currently selected Active Object. Likewise, a data update to an Active Object may cause the value of some variable to exceed the alarm limits for that variable set by the user. In such a case, the local dispatcher of the Active Object making the transition into the alert state will invoke a script processor 154 and send the user specified script for the appropriate alarm event to the script processor. The script processor then processes the script to carry out the commands specified in the script in the order specified in the script. If one of the commands in the script is to change a color or a font, the script processor will call the style map of the Active Object specified in the script (it may be different than the Active Object which triggered the script processing) and update the style map of that Active Object. If the script calls for publishing some data, the style processor calls the high level network interface 90, invokes a publish function and sends the appropriate data to be published on the network. Likewise, if the script calls for sending data to a database 156, this also can be done. The script may also call for invoking some function of the operating system through an operating system call 158, and can invoke other applications 160 running in the same environment. Further, the script processor may also cause; the other application to perform some function and may even cause the other application to access the network through the network interface 162 of the other application to either send or receive some data specified by the script.

DEPR:

Subject-based addressing is implemented by the communication component of the communication interface of the TIB.RTM. software by subject mapping. The communication component receives "subscribe" requests from an application which specifies the subject upon which data is requested. A subject-mapper module in the information layer receives the request from the application and then looks up the subject in a database, table or the like. The database stores "service records" which indicate the various server processes that supply data on various subjects. The appropriate service record identifying the particular server process that can supply data of the requested type and the communication protocol (hereafter sometimes called the service discipline) to use in communicating with the identified server process is returned to the subject-mapper module.

DEPR:

Alternatively, the table of FIG. 29 may be a database or other file stored somewhere in the network file system 224 in FIG. 21. In such a case, the routine performing the step 302 in FIG. 28 would know the network address and file name for the file to access for access to the table of FIG. 29.

DEPR:

A Get.sub.-- Field call delivers to the forms-class manager the address of the form involved and the name of the field in the form of interest. The process of receiving such a request is symbolized by block 320 in FIG. 32. Block 320 also symbolizes the process by which the class manager is given the class definition either programmatically, i.e., by the requesting application, or is told the location of a data base where the class definitions including the class definition for the form of interest may be found. There may be several databases or files in the network file system 224 of FIG. 21 wherein class definitions are stored. It is only necessary to give the forms-class manager the location of the particular file in which the class definition for the form of interest is stored.

## DEPR:

It is also possible for a service discipline to stand alone and not be coupled to a subject mapper. In this case the service discipline or service disciplines are linked directly to the application, and subscribe calls are made directly to the service discipline. The difference is that the application must know the name of the service supplying the desired data and the service discipline used to access the service. A database or directory-services table is then accessed to find the network address of the identified service, and communications are established as defined above. Although this software architecture does not provide data distribution decoupling, it does provide service protocol decoupling, thereby freeing the application from the necessity to know the details of the communications interface with the service with which data is to be exchanged.

## DEPR:

The TIB.RTM. interface for each service decouples the service from any requirement to have functionality capable of supporting filtering or subject based addressing. Thus, if a service is designed to broadcast all equity prices on the American Stock Exchange and Over-the-Counter market, but the subscription is simply for IBM equity prices, the service responds as it always has and need not have a function to filter out only IBM equity prices. The service discipline for this type service will be adapted to filter out all messages except IBM equity prices in response to such a subscription request.

## DEPR:

Note that our use of the term "form" differs from the standard use of the term in database systems and so-called "forms management systems." In those systems, a "form is a format for displaying a database or file record. (Typically, in such system, a user brings up a form and paints a database record into the form.)

## DEPR:

Our notion of a form is more fundamental, akin to such basic notions as record or array. Our notion takes its meaning from the original meaning of the Latin root word forma. Borrowing from Webster: "The shape and structure of something as distinguished from its material". Forms can be instantiated, operated on, passed as arguments, sent on a network, stored in files and databases. Their contents can also be displayed in many different formats. "templates" can be used to specify how a form is to be displayed. A single form (more precisely, a form class) can have many "templates" since it may need to be displayed in many different ways. Different kinds of users may, for example, desire different formats for displaying a form.

**WEST**☐ **Generate Collection**

L7: Entry 6 of 29

File: USPT

Jun 20, 2000

US-PAT-NO: 6078924

DOCUMENT-IDENTIFIER: US 6078924 A

TITLE: Method and apparatus for performing data collection, interpretation and analysis, in an information platform

DATE-ISSUED: June 20, 2000

## INVENTOR-INFORMATION:

| NAME                   | CITY           | STATE | ZIP CODE | COUNTRY |
|------------------------|----------------|-------|----------|---------|
| Ainsbury; Robert D.    | San Francisco  | CA    |          |         |
| Al Hussein; Hussein K. | Santa Clara    | CA    |          |         |
| Hinnant; Michael C.    | Foster City    | CA    |          |         |
| Lahham; Muwaffaq M.    | San Francisco  | CA    |          |         |
| Ludin; Stephen L.      | San Rafael     | CA    |          |         |
| Putterman; Daniel S.   | San Francisco  | CA    |          |         |
| Shotton; Frederick R.  | Hercules       | CA    |          |         |
| Tejada; Wilfredo M.    | Portola Valley | CA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME               | CITY          | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|--------------------|---------------|-------|----------|---------|-----------|
| Aeneid Corporation | San Francisco | CA    |          |         | 02        |

APPL-NO: 9/ 016758

DATE FILED: January 30, 1998

INT-CL: [7] G06F 17/00

US-CL-ISSUED: 707/101; 707/102

US-CL-CURRENT: 707/101; 707/102

FIELD-OF-SEARCH: 709/300, 382/103, 382/173, 707/1, 707/2, 707/3, 707/5, 707/103, 707/104, 707/200, 707/500, 707/101, 707/102

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

**Search Selected****Search ALL**

|                          | PAT-NO         | ISSUE-DATE    | PATENTEE-NAME     | US-CL   |
|--------------------------|----------------|---------------|-------------------|---------|
| <input type="checkbox"/> | <u>5361353</u> | November 1994 | Carr et al.       | 709/300 |
| <input type="checkbox"/> | <u>5608907</u> | March 1997    | Fehskens et al.   | 707/1   |
| <input type="checkbox"/> | <u>5633946</u> | May 1997      | Lachinski et al.  | 382/103 |
| <input type="checkbox"/> | <u>5732264</u> | March 1998    | Tanaka            | 707/104 |
| <input type="checkbox"/> | <u>5787437</u> | July 1998     | Potterveld et al. | 707/103 |
| <input type="checkbox"/> | <u>5832496</u> | November 1998 | Anand et al.      | 707/102 |
| <input type="checkbox"/> | <u>5832497</u> | November 1998 | Taylor            | 707/104 |
| <input type="checkbox"/> | <u>5848184</u> | December 1998 | Taylor et al.     | 382/173 |
| <input type="checkbox"/> | <u>5870741</u> | February 1999 | Kawabe et al.     | 707/5   |
| <input type="checkbox"/> | <u>5870746</u> | February 1999 | Knutson et al.    | 707/101 |
| <input type="checkbox"/> | <u>5907837</u> | May 1999      | Ferrel et al.     | 707/3   |
| <input type="checkbox"/> | <u>5909688</u> | June 1999     | Yoshioka et al.   | 707/200 |
| <input type="checkbox"/> | <u>5913205</u> | June 1999     | Jain et al.       | 707/2   |
| <input type="checkbox"/> | <u>5918236</u> | June 1999     | Wical             | 707/500 |

## FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE   | COUNTRY | US-CL |
|----------------|-------------|---------|-------|
| WO96/23265     | August 1996 | WOX     |       |
| WO97/15018     | April 1997  | WOX     |       |

## OTHER PUBLICATIONS

Ashish et al., Semi-Automatic Wrapper Generation for Internet Information Sources, 1997, Information Sciences Institute and Department of Computer Science.

ART-UNIT: 271

PRIMARY-EXAMINER: Amsbury; Wayne

ASSISTANT-EXAMINER: Pardo; Thuy

ATTY-AGENT-FIRM: Glenn; Michael A. Peil; Christopher

## ABSTRACT:

An information platform automates the collection of data, provides a method for organizing the library of information and provides analysis using multiple content-types, thereby providing a user with a market understanding necessary to execute rapid and knowledgeable decision making. The information platform collects and integrates data, observations and intelligence; provides controls for multiple methods of information navigation and analysis; and allows details to be digested in the context of other data, regardless of its type. The information platform is a client/server implementation that is subdivided into four major sections, including: (1) Data Retrieval, which provides a sophisticated catalog for finding internal and external information and collection agents which retrieve specific information without user intervention; (2) Data Classification and Storage which handles the storage of the information once it has been gathered from a source; (3) Information Browsing, Query, Analysis, and Report Creation which provides information browsing, reporting, and analysis tools; and (4) Desktop Integration where the information platform takes information from a wide variety of formats (HTML, text, spreadsheet) and combines them all into a single format (HTML, text, spreadsheet).

11 Claims, 11 Drawing figures

**WEST**

Generate Collection

L7: Entry 18 of 29

File: USPT

Jan 26, 1999

US-PAT-NO: 5864871

DOCUMENT-IDENTIFIER: US 5864871 A

TITLE: Information delivery system and method including on-line entitlements

DATE-ISSUED: January 26, 1999

## INVENTOR-INFORMATION:

| NAME                 | CITY               | STATE | ZIP CODE | COUNTRY |
|----------------------|--------------------|-------|----------|---------|
| Kitain; Eduard       | Brooklyn           | NY    |          |         |
| Karaev; Isaak        | Brooklyn           | NY    |          |         |
| Mahoney; John J.     | Princeton Junction | NJ    |          |         |
| McCarthy; Mary Ellen | Atlantic Highlands | NJ    |          |         |
| Tousignant; James M. | Hartsdale          | NY    |          |         |
| Baird; George        | New York           | NY    |          |         |
| Blazek; Paul         | Forest Hills       | NY    |          |         |

## ASSIGNEE-INFORMATION:

| NAME           | CITY     | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|----------------|----------|-------|----------|---------|-----------|
| Multex Systems | New York | NY    |          |         | 02        |

APPL-NO: 8/ 789768

DATE FILED: January 28, 1997

## PARENT-CASE:

RELATED APPLICATIONS This application is a continuation-in-part of U.S. patent application, Ser. No. 08/658,966, filed Jun. 4, 1996 now pending, and a continuation-in-part of U.S., patent application, Ser. No. 08/739,377, filed Oct. 29, 1996 now pending.

INT-CL: [6] G06F 17/30

US-CL-ISSUED: 707/104; 707/10, 707/9

US-CL-CURRENT: 707/104.1; 707/10, 707/9

FIELD-OF-SEARCH: 707/104, 707/10, 707/9

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

|                          | PAT-NO         | ISSUE-DATE     | PATENTEE-NAME   | US-CL |
|--------------------------|----------------|----------------|-----------------|-------|
| <input type="checkbox"/> | <u>5089956</u> | February 1992  | MacPhail        | N/A   |
| <input type="checkbox"/> | <u>5247661</u> | September 1993 | Hager et al.    | N/A   |
| <input type="checkbox"/> | <u>5262942</u> | November 1993  | Earle           | N/A   |
| <input type="checkbox"/> | <u>5265242</u> | November 1993  | Fujisawa et al. | N/A   |
| <input type="checkbox"/> | <u>5297032</u> | March 1994     | Trojan et al.   | N/A   |
| <input type="checkbox"/> | <u>5301350</u> | April 1994     | Rogan et al.    | N/A   |
| <input type="checkbox"/> | <u>5321750</u> | June 1994      | Nadan           | N/A   |
| <input type="checkbox"/> | <u>5333246</u> | July 1994      | Nagasaka        | N/A   |
| <input type="checkbox"/> | <u>5410693</u> | April 1995     | Yu et al.       | N/A   |
| <input type="checkbox"/> | <u>5502637</u> | March 1996     | Beaulieu et al. | N/A   |
| <input type="checkbox"/> | <u>5511156</u> | April 1996     | Nagasaka        | N/A   |
| <input type="checkbox"/> | <u>5513126</u> | April 1996     | Harkins et al.  | N/A   |
| <input type="checkbox"/> | <u>5537586</u> | July 1996      | Amram et al.    | N/A   |
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## FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE     | COUNTRY | US-CL |
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| WO 93/15466    | August 1993   | WOX     |       |
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ART-UNIT: 271

PRIMARY-EXAMINER: Amsbury; Wayne

ATTY-AGENT-FIRM: Kenyon &amp; Kenyon

## ABSTRACT:

An integrated computer-implemented corporate information delivery system. A database stores research reports produced by and received electronically from brokerage firms. The database also stores corporate information about a number of corporations. Each item of corporate information is produced by and received electronically from one of the corporations about that corporation. Authorization information ("entitlements") specifies who is authorized to access each research report or item of corporate information. An entitlement subsystem allows the contributor of the research report or item of corporate information to dynamically

change, on-line, the entitlement status of any or all users/subscribers. A research delivery module allows a user to submit a query and receive query results listing research reports and corporate information satisfying the query and that the user is authorized to access. A corporate register module outputs corporate information, the corporate information output according to a common format. The corporate information may be distributed via the Internet.

23 Claims, 14 Drawing figures



**WEST**☐ **Generate Collection**

L14: Entry 38 of 63

File: USPT

Sep 28, 1999

US-PAT-NO: 5960200

DOCUMENT-IDENTIFIER: US 5960200 A

TITLE: System to transition an enterprise to a distributed infrastructure

DATE-ISSUED: September 28, 1999

## INVENTOR-INFORMATION:

| NAME              | CITY          | STATE | ZIP CODE | COUNTRY |
|-------------------|---------------|-------|----------|---------|
| Eager; Timothy    | Fullerton     | CA    |          |         |
| Anand; Madhav     | Cambridge     | MA    |          |         |
| Aslanian; Edouard | Hermosa Beach | CA    |          |         |

## ASSIGNEE-INFORMATION:

| NAME   | CITY      | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|--------|-----------|-------|----------|---------|-----------|
| i-CUBE | Cambridge | MA    |          |         | 02        |

APPL-NO: 8/ 714205

DATE FILED: September 16, 1996

## PARENT-CASE:

RELATED APPLICATIONS This application claims priority to U.S. Provisional Application No. 60/016,330 filed on May 3, 1996, the teachings of which are incorporated herein by reference in their entirety.

INT-CL: [6] G06F 9/45

US-CL-ISSUED: 395/705; 395/701, 395/707, 395/500, 395/200.31, 705/7

US-CL-CURRENT: 717/5; 703/13, 703/20, 705/7, 709/201, 717/1, 717/7

FIELD-OF-SEARCH: 395/705, 395/701, 395/702, 395/707, 395/708, 395/500, 395/200.31, 395/200.33, 395/682, 395/683, 705/7-11, 707/10, 707/100, 707/102-104, 364/578, 364/468.02, 364/468.03, 364/468.05, 364/468.09

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

☐ **Search Selected**☐ **Search ALL**

| PAT-NO                                  | ISSUE-DATE    | PATENTEE-NAME      | US-CL      |
|---|---------------|--------------------|------------|
| <input type="checkbox"/> <u>5119465</u> | June 1992     | Jack et al.        | 395/500    |
| <input type="checkbox"/> <u>5228137</u> | July 1993     | Kleinerman et al.  | 395/500    |
| <input type="checkbox"/> <u>5455948</u> | October 1995  | Poole et al.       | 707/102    |
| <input type="checkbox"/> <u>5457797</u> | October 1995  | Butterworth et al. | 395/682    |
| <input type="checkbox"/> <u>5524253</u> | June 1996     | Pham et al.        | 395/200.32 |
| <input type="checkbox"/> <u>5606697</u> | February 1997 | Ono                | 395/707    |

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Mittra, S.S., "A Road Map for Migrating Legacy Systems to Client/Server," Software Maintenance: Research and Practice, vol. 7, pp. 117-130, (1995).

"DASE--Base Technology for Data and Applications Software Evolution and HIREL HIERarchical to RELational for an automated Migration to an open, relational and Client/Server positioned Environment," SWS Software Services, pp. 1-4, (1994).

"DASE Base Technology for Data and Acquisitions Software Evolution and HIREL/AProp IMS/DB-DB2 dual way Access Propagation for an automated Migration to an open, relational and Client/Server positioned Environment," SWS Software Services, pp. 1-4, (1994).

"DASE Base Technology for Data and Applications Software Evolution and IXREL IBM hIERarchisch to uniX RELational for an automated Migration to an open, relational and Client/Server positioned Environment," SWS Software Services, pp. 1-4, (1994).

"DASE Base Technology for Data and Applications Software Evolution and CMP COBOL Migration Products for an automated Migration from COBOL ANS'68/74 to COBOL ANS'85 and REPORT WRITER to Native COBOL," SWS Software Services, pp. 1-4, (1994).

"DASE Base Technology for Data and Acquisitions Software Evolution and VREL Vsam to RELational for an automated Migration to an open, relational and Client/Server positioned Environment," SWS Software Services, pp. 1-4, (1994).

ART-UNIT: 272

PRIMARY-EXAMINER: Hafiz; Tariq R.

ASSISTANT-EXAMINER: Dam; Tuan Q.

ATTY-AGENT-FIRM: Hamilton, Brook, Smith & Reynolds, P.C.

#### ABSTRACT:

An automated system transitions an entire enterprise to a distributed infrastructure. The system includes a process for organizing and managing the transition, a multi-tiered client/server architecture that adheres to open systems standards, a system to automate the transition of existing applications to this architecture, and a system to enable the creation or modification of applications based on this architecture.

54 Claims, 36 Drawing figures

**WEST**

Generate Collection

L20: Entry 19 of 47

File: USPT

Nov 2, 1999

US-PAT-NO: 5978779

DOCUMENT-IDENTIFIER: US 5978779 A

TITLE: Distributed architecture utility

DATE-ISSUED: November 2, 1999

## INVENTOR-INFORMATION:

| NAME              | CITY         | STATE | ZIP CODE | COUNTRY |
|-------------------|--------------|-------|----------|---------|
| Stein; Derek N.   | Larchmont    | NY    |          |         |
| Thomas; Arthur L. | Saddle River | NJ    |          |         |
| Alexander; Mark   | Montvale     | NJ    |          |         |

## ASSIGNEE-INFORMATION:

| NAME                                  | CITY     | STATE | ZIP CODE | COUNTRY | TYPE | CODE |
|---------------------------------------|----------|-------|----------|---------|------|------|
| Merrill Lynch, Pierce, Fenner & Smith | New York | NY    |          |         |      | 02   |

APPL-NO: 8/ 970483

DATE FILED: November 14, 1997

INT-CL: [6] G06F 17/60

US-CL-ISSUED: 705/37; 707/10

US-CL-CURRENT: 705/37; 707/10

FIELD-OF-SEARCH: 705/1, 705/35, 705/36, 705/37, 707/1, 707/10, 707/104, 707/500, 707/523, 707/530

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

|                          | PAT-NO         | ISSUE-DATE     | PATENTEE-NAME     | US-CL   |
|--------------------------|----------------|----------------|-------------------|---------|
| <input type="checkbox"/> | <u>4346442</u> | August 1982    | Musmanno          | 705/36  |
| <input type="checkbox"/> | <u>4376978</u> | March 1983     | Musmanno          | 705/36  |
| <input type="checkbox"/> | <u>4597046</u> | June 1986      | Musmanno et al.   | 705/36  |
| <input type="checkbox"/> | <u>4674044</u> | June 1987      | Kalmus et al.     | 705/37  |
| <input type="checkbox"/> | <u>4774663</u> | September 1988 | Musmanno et al.   | 705/37  |
| <input type="checkbox"/> | <u>5270922</u> | December 1993  | Higgins           | 705/37  |
| <input type="checkbox"/> | <u>5297032</u> | March 1994     | Trojan et al.     | 705/37  |
| <input type="checkbox"/> | <u>5502637</u> | March 1996     | Beailieu et al.   | 705/36  |
| <input type="checkbox"/> | <u>5596748</u> | January 1997   | Kleewein et al.   | 707/10  |
| <input type="checkbox"/> | <u>5655152</u> | August 1997    | Ohnishi et al.    | 395/856 |
| <input type="checkbox"/> | <u>5671363</u> | September 1997 | Cristofich et al. | 705/37  |
| <input type="checkbox"/> | <u>5706499</u> | January 1998   | Kleewein et al.   | 707/10  |
| <input type="checkbox"/> | <u>5847708</u> | December 1998  | Wolff             | 345/349 |

ART-UNIT: 271

PRIMARY-EXAMINER: Cosimano; Edward R.

ATTY-AGENT-FIRM: Hopgood, Calimafde, Kalil &amp; Judlowe, LLP

## ABSTRACT:

The invention provides a system and device for integrating and structuring the relationships of a financial services provider (FSP) with its clients and with third parties (counterparties) with which the FSP transacts business. Preferably, each entity with which the FSP transacts business, preferably also including entities internal to the FSP, is assigned a unique, non-intelligent identifier (CCID), and a relationship is established between each identifier and at least one other entity likewise identified. The system allows the FSP's users to seamlessly access information and transact business with all entities regardless of whether such entities are clients or third party providers (such as money managers). The system can be implemented on a network system. The system preferably also includes a library by which documents required for a particular transaction or account are associated with the entity(ies) engaging in such transaction or for which the account is generated, and also preferably a tracking system for assuring that required documents are forwarded when necessary and executed and returned as required.

11 Claims, 7 Drawing figures

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L3: Entry 14 of 37

File: USPT

Sep 19, 2000

US-PAT-NO: 6122635

DOCUMENT-IDENTIFIER: US 6122635 A

TITLE: Mapping compliance information into useable format

DATE-ISSUED: September 19, 2000

## INVENTOR-INFORMATION:

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FIELD-OF-SEARCH: 705/36, 705/37, 705/4, 707/104, 707/9, 707/102

PRIOR-ART-DISCLOSED:

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☐ **Search Selected**☐ **Search ALL**

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| <input type="checkbox"/> | <u>5918218</u> | June 1999     | Harris et al.     | 705/37  |
| <input type="checkbox"/> | <u>5926792</u> | July 1999     | Koppes et al.     | 705/4   |

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ART-UNIT: 271

PRIMARY-EXAMINER: Amsbury; Wayne

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## ABSTRACT:

A system for providing access to compliance information includes a subsystem for acquiring securities information from one or more database sources. The system extracts compliance information from the acquired securities information that is related to a particular security. The system also includes a subsystem for providing access to the computer-readable compliance information files over a computer communications link.

30 Claims, 7 Drawing figures